



4.2.2 Cochise County

Geography

Cochise County is one of only three counties in the State without an Indian Reservation. The County is comprised of 6,251 square miles, with the City of Bisbee serving as the County seat since 1929. The San Pedro River is the largest watercourse flowing through the County. Other major regional watercourses include Babocomari River, San Simon River and Whitewater Draw. The County has been mapped into two ecoregions, the Chihuahuan Desert and the Sierra Madre Occidental Pine-Oak Forest. The desert ecoregion elevations vary between 3,000 to 4,500 feet with average temperatures cooler than the Sonoran Desert due to elevation differences. However, the summers are hot and dry with mild to cool winters. The Forest ecoregion elevations are generally above 5,000 feet. Average temperatures tend to be cool during summers and cold in winter.

Population

In the year 2005, the population of the County was 131,790. The County grew at a rate of 11.9% between 2000 and 2005, substantially lower than the State's growth rate of 17.8% during the same period. The populations of the major communities in the County are shown below. Population projections suggest very modest growth for the foreseeable future. Much of this new development is expected occur in and around the incorporated community of Sierra Vista. Other communities in the County are also expected to grow moderately over the coming decades. Based on some of the jurisdictions' past and most recent population data, the projected data may appear inaccurate. This discrepancy is due to higher than expected growth and the projection data source. The US Census Bureau's latest published survey is from the year 2000.

Cochise County Population, 1990-2040							
Jurisdiction	1990	2000	2005	2010	2020	2030	2040
Cochise County	97,624	117,755	131,790	146,037	169,717	187,725	201,179
Benson	3,824	4,711	4,740	4,472	4,499	4,574	4,671
Bisbee	6,288	6,090	6,570	6,676	6,692	6,737	6,794
Douglas	12,822	14,312	17,195	16,252	16,458	16,855	17,329
Huachuca City	1,782	1,751	1,830	2,229	2,362	2,469	2,551
Sierra Vista	32,983	37,775	43,690	46,642	52,571	56,757	59,493
Tombstone	1,220	1,504	1,610	1,595	1,611	1,655	1,711
Willcox	3,122	3,733	3,885	3,914	3,944	4,026	4,132
Note: Figures for 1990, 2000, 2005 from Arizona Dept. of Commerce. Figures for 2010-2040 from AZ DES (projections date from 1997).							
Source: Arizona Department of Commerce, April 2007; Arizona Department of Economic Security, February 1997.							

Economy & Labor Force

The County's economy, once strong mining and agriculturally oriented, is becoming more balanced as manufacturing, retail trades and tourist related employment gain in importance. Copper mining in the southern portion of the County, has declined due to mine closures or cut-backs. Tourism contributes to the area economy mostly due to the County's rich heritage from the lawless Arizona Territorial days. The major industries of the County include: Services, Retail Trade, Construction and Agriculture. The County has a civilian labor force of 55,653 workers and an unemployment rate of 4.9%, only slightly higher than the statewide rate of 4.6%.

Historic Hazard Events

During the development of the original State of Arizona All-Hazard Mitigation Plan, a list of historic hazard events was compiled. Most counties researched local records and governmental databases to update and add records of recent hazards to the state compiled list for use in their county plans. Additional hazard records were researched using the same criteria, with the exception that all damages greater than \$1 were included. Therefore, due to the variety of data sources and criteria, it should be kept in mind that the numbers reported reflect the availability of such data from those sources and the numbers are expected to significantly under-predict the losses actually sustained over the past 30 to 40 years. A more thorough search for historic data in future planning efforts is mentioned in the county plans and encouraged by ADEM.

It is our hope that this data coupled with other risk assessment information will prove to be instrumental in assisting the County and State in future planning and mitigation efforts. We believe this can happen by this data accurately indicating which hazards we are most susceptible to; how damaging these hazards can be to us; and the damage costs or costs avoided through future mitigation projects.



Historic Record of Disaster Events in Cochise County								
Event Type	Statewide or Multiple County, Incl Cochise				Substantially Cochise			
	Total	Fatalities	Injuries	Loss \$	Total	Fatalities	Injuries	Loss \$
Drought	68	0	0	300,000,000	0	0	0	0
Dust/Sand Storms	2	3	4	47,000	10	2	28	156,000
Flooding/Flash Flooding	8	48	975	874,800,000	65	19	1	1,273,000
Hazardous Materials Incidents	3	0	0	0	29	5	17	0
Thunderstorms/High Winds	6	0	0	3,263,000	112	2	5	1,602,000
Tornadoes/Dust Devils	0	0	0	0	15	0	2	100,000
Wildfire	16	0	0	0	155	0	0	0
Winter Storms	4	0	0	10,000	10	0	0	0
Note: "Statewide or Multiple County, Incl Cochise" events met the 1 or more of the following criteria: at least 1 injury and/or fatality or Historical Significance. All had at least \$50,000 in reported Losses. "Substantially Cochise" events met 1 or more of the following criteria: at least 1 reported injury and/or fatality or Historical Significance. No minimum dollar amount for Losses was used. All information is derived from the best data available at the time.								
Source: Cochise County Multi-Hazard Mitigation Plan, FEMA Approved January 2007.								

Vulnerability

The County has a comparatively small number and modest percentage of residents that are potentially vulnerable to hazards. With a total population of 131,790, the County contains a small proportion of the State's overall resident base (2.2%). The County has a comparatively balanced population, with 25.3% (33,343) of its residents 18 years old or less and 16.1% (21,482) over the age of 65.

Cochise County Populations Potentially Vulnerable to Hazards, 2005				
Jurisdiction	Population			
	Total	Under 18 yrs	65+ years	Below Poverty Level
Arizona	6,044,985	1,607,966	773,758	840,253
Cochise County	131,790	33,343	21,218	21,482
As a % of County	100%	25.3%	16.1%	16.3%
As a % of State	2.2%	2.1%	2.7%	2.6%
Source: Estimates based on US Census Bureau data, 2007. Poverty Level as defined by US Census Bureau.				

Cochise County Dwelling Units Potentially Vulnerable to Hazards, 2005		
Jurisdiction	Housing Units	
	Total	Built Before 1970
Arizona	2,544,806	490,710
Cochise County	54,911	16,658
Source: Estimates based on US Census Bureau. Data, 2007.		

Hazards & Mitigation Strategy

Using the results of the County's vulnerability and capability analysis and the goals and objectives, a list of actions/projects was formulated. The actions/projects were then evaluated and ranked using the STAPLEE procedure. Below are the top ranking identified hazards and their actions/projects as indicated in the County's Hazard Mitigation Plan approved by FEMA on January 25, 2007:

Flooding/Flash Flooding

Action 1: Culvert construction to mitigate flood damage and to maintain access along Ramsey Road, from State Route 92 to Moson Road.

Action 2: Culvert construction to mitigate flood damage and to maintain access along Moson Road, from Ramsey Road to State Route 90.

Thunderstorms/High Winds

Action 1: Review existing Cochise County building codes for inclusion of provisions for addressing high winds and revise as needed to protect existing and future structures.



Wildfires

Action 1: Support part-time road crew to perform roadside hazard fuel reduction along county roads.

Mitigation Strategy Progress

Through development of this Plan, the need to significantly refine the goals/objectives and actions/projects in our original Plan was evident. We believe this need is a result of the determination to focus the Plan more on natural caused hazards as other hazards are covered in their appropriate plans (i.e. health, terrorism, etc.). There is also much to be said about the increased amount of information available regarding hazard mitigation planning.

To encourage our jurisdictions to re-evaluate their Plan's Mitigation Strategy as well, each County was asked to indicate their action/project progress since the development of their Plan. In response to our request, the County provided the information below in June 2007:

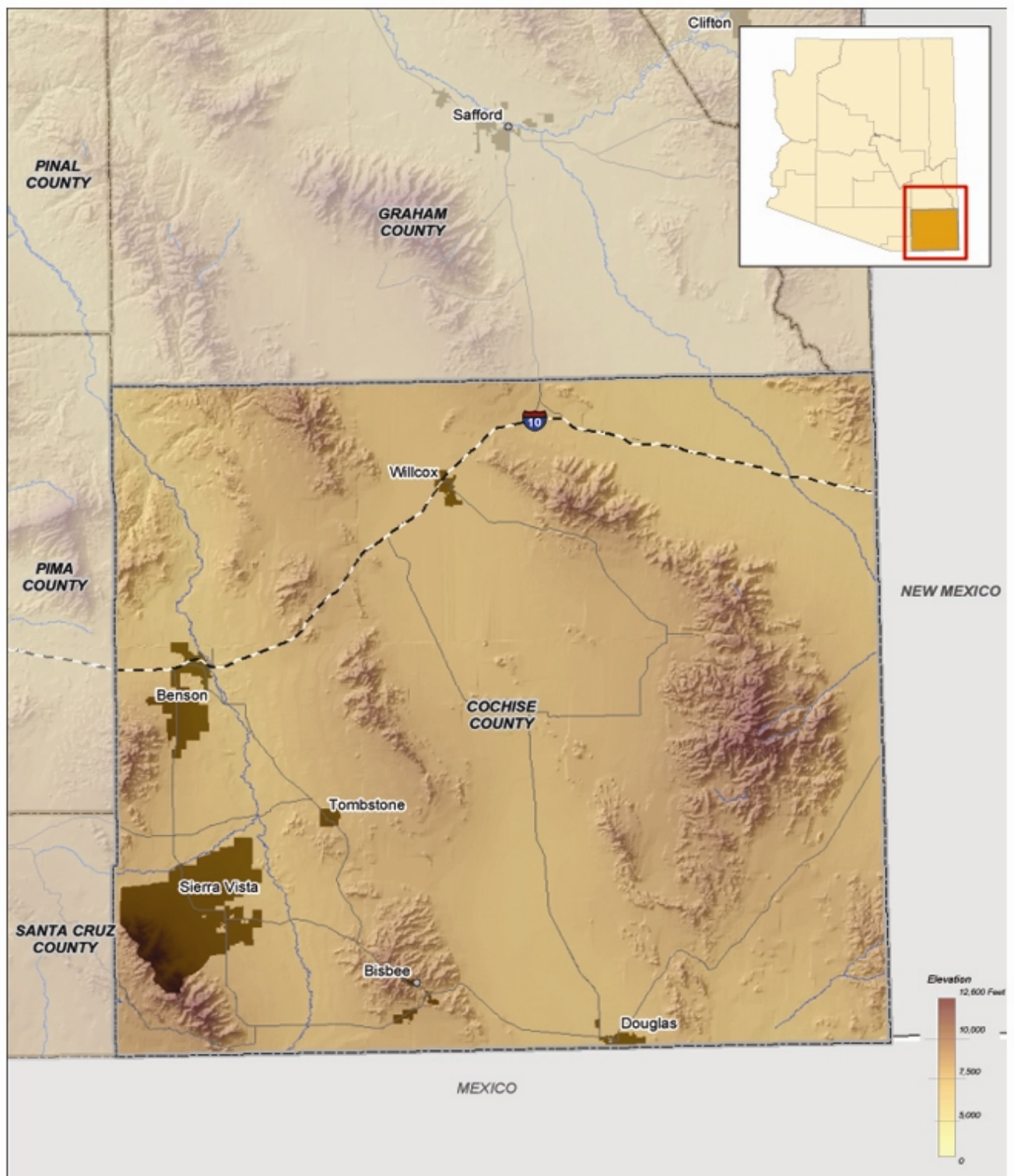
Action/Project Name	Action# in Current Plan	Hazard Mitigated	Progress Summary	Comments
County Fire Fuel Control	6.B.3	Wildfire	Controlling growth of vegetation along roadways to control fire starts.	
County EOC	3.B.1	Mitigation/Response	Work continues on the dev of county EOC. Work has been completed on two more proposed sites.	Mtgs will continue until a suitable site is found. The Co & City of Sierra Vista are setting aside monies for an EOC & combined comm facility.
Drought Relief Plan	Not specified in Plan	Drought	We continue to be involved w/local Drought Impact Group as identified by the State Drought Plan. We meet semi-regularly & participate in reporting to the State.	

Other Planning Mechanisms

During their planning process, the County staff reviewed and evaluated their resources and capabilities in the areas of Existing Plans, Policies and Ordinances; Technical Staff/Resources and Financial Resources. Although all resources are important to a community's ability to mitigate the effects of natural and human-caused hazards, we elected to ask the County to complete a survey indicating their legal and regulatory resources to be included in the Plan. We are pleased to receive feedback that reflects awareness of the need for regulations and guidelines that may have an effect on loss reduction. We believe such resources and capabilities can play a critical part in developing and maintaining a more disaster resistant community. The information below was provided by the County in June 2007:

Plan/Policy/Ordinance	Yes or No	Approval Date	Responsible Authority	Plan Use/Comments
Building Code	Y	4/2007	Building Dept.	Was done in 3 phases is now countywide.
Zoning Ordinance	Y	1975	Zoning Dept.	
Subdivision Ordinance or	Y	1974	Planning Dept.	
Special Purpose Ordinance	Y	1974	Zoning Dept.	Have Special Use Permits in Zoning Ord. Is currently being updated.
Growth Management Ordinance	N			County is subject to Smart Growth legislation passed by the State.
Site Plan Review Requirements	Y	2000	Zoning/Planning	
General or Comprehensive Plan	Y	2003	Planning/Zoning	
Capital Improvement Plan	Y	2007	Highways	New plan developed or updated every yr.
Emergency Response Plan	Y		CCOEM	
Post-Disaster Recovery Plan	Y		CCOEM	Part of new ERRP.
Real Estate Disclosure Statement	N			No, but believe this is required by state law for realtors.

Source: Survey from ADEM to County Emergency Managers, 2007.



LEGEND

- - Interstate
- Highway
- City
- Major Stream
- County
- Lake
- County Seat



State of Arizona
Multi-Hazard Mitigation Plan

Map 4
Major Features of
Cochise County